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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SINGH, RAMNANDAN P	
ART UNIT	**PAPER NUMBER**
2644	

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/815,386	Applicant(s) WITTY ET AL.	
	Examiner Dr. Ramnandan Singh	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Preliminary Amendment

1. Preliminary amendment filed on 10 January 2002 is approved.

Drawings

2. The drawings filed on 06 July 2001 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 10-14, 18-21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinclair, III et al [US 20020118820 A1] in view of Bolinger et al [US 5,892,663].

Regarding Claim 1, Sinclair, III et al teaches a telecommunication assembly

(i.e. electronic assembly and high density digital line subscriber line splitter) [Fig. 1; Abstract] wherein the splitter includes six splitter port cards, each of which includes twenty-four splitter ports. These six splitter port cards are in electrical communication with eighteen external connectors, of which six provide digital subscriber line connections (i.e. **data connections**), six provide public switch telephone network connections (i.e. **voice connections**), and six provide loop connections (i.e. **line connections**) [Para. 0013]. Fig. 6 shows a diagrammatic view showing the circuits making up a single splitter port including a plurality of splitters physically connected to a board [Para. 0009; 0034; 0049-0056]. Each splitter card is disposed within the housing between, and in substantially perpendicular relation to, the first side and the second side. A connector card is disposed adjacent, and in substantially parallel relation, to the back of the housing. The connector card includes a plurality of external connectors that extend through the openings through the back of the housing. Finally, an edge card is disposed in substantially parallel relation to the connector card wherein the edge card includes a plurality of internal connectors disposed in electrical communication with the external connectors of the connector card [Para. 0011; 0040-0046; 0057; 0059].

Sinclair, III et al does not teach expressly insulators connected to the circuit board so as to cover the exposed ends of the termination posts. However, this use of insulators for protecting from electrical shocks is well-practice in the art.

Bolinger et al teaches electrical circuit packaging using a flexible insulator for telecommunications circuit boards for protecting a device against electrical shock or other hazards from electrical components on a card wherein the insulator is always made of some dielectric materials. In addition, double-faced foam adhesive strips are used to further secure the insulator to the card [Abstract; col. 2, lines 4-27].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the dielectric insulators of Bolinger et al to cover the exposed areas of the electric connections with Sinclair, III et al. The suggestion for doing so would have been to protect a device from electric shocks or other hazards from electrical components on the circuit board [Bolinger et al; col. 1, lines 19-24].

Claims 10 and 18 are essentially similar to Claim 1 and are rejected for the reasons stated above apropos of claim 1.

Regarding claim 2, Sinclair, III et al uses standard 50 pin Amphenol type connectors for connecting the line, data and voice, wherein each splitter card includes 24 splitter ports [Para. 0009; 0010; 0012; 0017; 0007; 0013; 0049].

Claim 11 is essentially similar to claim 2 and is rejected for the reasons stated above apropos of claim 2.

Regarding claim 3, Sinclair, III et al teaches that each splitter card is disposed within the housing between, and in substantially perpendicular relation to, the first side and the second side. In essence, this is vertically stacked [Para. 0011].

Regarding claim 4, the combination of Sinclair, III et al and Bolinger et al teaches applying fasteners to attach the insulator to the circuit board [Bolinger et al; col.2, lines 14-20].

Claims 12 and 19 are essentially similar to Claim 4 and are rejected for the reasons stated above apropos of claim 4.

Regarding claim 5, the combination of Sinclair, III et al and Bolinger et al teaches applying an adhesive strip to firmly secure the insulator to the card, wherein the strip includes a double-face high-bond strength vinyl foam back tape [Bolinger et al; col. 2, line 45 to col. 3, line 8].

Claims 13 and 20 are essentially similar to Claim 1 and are rejected for the reasons stated above apropos of claim 5.

Regarding claim 6, the combination of Sinclair, III et al and Bolinger et al teaches using a plurality of rectangular strips [Bolinger et al; col. 3, lines 9-37; col. 2, lines 14-20] and using fasteners that include screws [Sinclair, III et al ; col. 6, lines 37-38].

Claims 14 and 21 are essentially similar to Claim 1 and are rejected for the reasons stated above apropos of claim 6.

Regarding claim 25, Bolinger et al teaches using fasteners to pass through the holes to electrically couple the insulator to the electrical ground of the card holding connectors. In addition, Bolinger et al discloses applying fasteners to attach the insulator to the card [col. 2, lines 14-19; col. 4, lines 54-60]. Thus, the fasteners of Bolingers et al provide a dual function of connecting the insulator members to the circuit board and stabilizing the connectors shown in Fig 1 of Sinclair, III et al.

5. Claims 7-9, 15-17, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sinclair, III et al and Bolinger et al as applied to claim 6 above, and further in view of Miniet [US 4,567,543].

Regarding Claims 7-8, the combination of Sinclair, III et al and Bolinger et al does not teach an insulation strip having a recess.

Miniet teaches a flexible electronic module for a circuit board. The flexible circuit board is attached to insulative carrier member 110 by placing a piece of insulative tape 40 (i.e. strip) wherein the insulative carrier member 110 may include a number of recessed areas 180, of various sizes and shapes , to accommodate the differing

physical configurations of the components 120 [col. 4, lines 9-68; Fig. 3; col. 4, line 35 to col. 5, line 2].

Sinclair, III et al, Bolinger et al and Miniet are analogous art because they are from a similar problem solving area, viz. , circuit board insulation.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the recessed areas located on insulative carrier member of Miniet to the combination of Sinclair, III et al and Bolinger et al .

The suggestion/motivation for doing so would have been to give greater pliability and flexibility to the flexible circuit board 10 [Miniet; col. 4, lines 23-28].

Regarding claims 15-16 and 22-23, the limitations are shown above.

Regarding claim 9, Miniet teaches applying recessed areas of various shapes and sizes that include a rectangular recess [col. 4, lines 60-68].

Claims 17 and 24 are essentially similar to Claim 9 and are rejected for the reasons stated above apropos of claim 9.

6. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolinger et al [US 5,892,663] in view of Miniet [US 4,567,543].

Regarding claim 26, Bolinger et al teaches a flexible insulator for a telecommunication device shown in Figs. 2A and 2B, the insulator wherein the insulator is fabricated from a one-piece insulative material in which openings and natural hinges separate the insulative material into **two sections**, each section adaptable to cover electrical components on opposite of a circuit board [col. 2, lines 4-13. The insulator comprises a plurality of rectangular strips or elongated side members ; and the mounting rims defining openings for receiving fasteners and brackets [Fig. 3, col. 2, line 45 to col. 3, line 37; col. 4, line 61 to col. 5, line 15].

Bolinger does not teach a recess in the insulation strip.

Miniet teaches a flexible electronic module for a circuit board. The flexible circuit board is attached to insulative carrier member 110 by placing a piece of insulative tape 40 (i.e. strip) wherein the insulative carrier member 110 may include a number of recessed areas 180, of various sizes and shapes , to accommodate the differing physical configurations of the components 120 [col. 4, lines 9-28; Fig. 3; col. 4, line 35 to col. 5, line 2].

Bolinger et al and Miniet are analogous art because they are from a similar problem solving area, viz. , circuit board insulation.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the recessed areas located on insulative carrier member of Miniet to Bolinger et al .

The suggestion/motivation for doing so would have been to give greater pliability and flexibility to the flexible circuit board [Miniet; col. 4, lines 23-28].

Regarding claim 27, Miniet teaches applying recessed areas of various shapes and sizes that include a rectangular recess [col. 4, lines 60-68].

Regarding claims 28 and 29, Miniet teaches rounded recessed shoulder areas 180 to accommodate rounded mountings [col. 4, lines 9-28; col. 5, line 35 to col. 6, line 2].

Regarding claims 30-31, the combination of Bolinger et al and Miniet does not teach expressly the specific values of the recess as claimed. However, since Miliet teaches an insulative carrier member 110 that can include a number of recessed areas 180 , of various sizes and shapes , to accommodate the differing physical configurations of the components 120 [col. 4, lines 60-68]; it would have been obvious to one of

ordinary skill in the art at the time the invention was made to use any dimension for the recess of the insulator in order to accommodate the covering of exposed termination posts of the telecommunications device subject to circuit, system and design constraints.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(i) Guenther et al [US 6,438,226 B1] for splitter assembly [Entire document];

(ii) Kledzik et al [US 6,545,868 B1] for an electronic module [Figs. 1-25]; and

(iii) Tohya et al [US 6,359,237 B1].

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Ramnandan Singh whose telephone number is (703)308-6270. The examiner can normally be reached on M-F(8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester Isen can be reached on (703)-305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

Dr. Ramnandan Singh
Examiner
Art Unit 2644

January 26, 2004

SPE, AU 2644